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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,490	01/09/2002	Yuki Nakamura	2271/66507	9287

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EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/044,490	Applicant(s) NAKAMURA ET AL.	
	Examiner Martin J Angebranndt	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,24,27,30,33,36,39,42 and 44-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,24,27,30,33,36,39,42 and 44-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The response of the applicant has been read and given careful consideration. Responses to the arguments of the applicant are presented after the first rejection to which they are directed.
2. Claims 36,39,42,47 and 48 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 24,27,3044 and 46. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Yamada et al. EP 0717404.

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Examples 2 and 3 in table 2 have the compositions shown in tables 2 as the recording layer in media comprising a polycarbonates substrate, a 200 nm ZnS-SiO₂ lower dielectric layer, a 25 nm recording layer, a 30 nm ZnS-SiO₂ upper dielectric layer, a 100 nm Al alloy reflective layer and a 5 micron UV cured resin as the protective layer. The sum of the Te and Sb are 91 and 85.4 % respectively. Comparative examples 1 and 2 use the same structure and meet the limitations of the claims. (table 2, cont). The sum of the Te and Sb are 99.5 and 95.9 % respectively. The benefits of adding 2% nitrogen is illustrated in table 3 on page 12. The addition of Ti, Cr or Si to the reflective layer is disclosed. (8/29-31).

With respect to claims 21,24,27,30,33,36,39 and 42, the examiner notes that all the media cited have been initialized and that these initializations are equivalent to that recited in the claims and that the applicant has the burden of proving otherwise through testing and the presentation of declaration evidence as set forth in MPEP 2113 as the claims are directed to products by process. The applicant argues that they have found through extensive experimentation, that the when powers above 1000 J/m² are used, the media have high jitter. **The examiner notes that the extensive data refereed to corresponds to the 25 tests in example 24 (table 4) only corresponds to a single medium with an AgInTeSb alloy layer and a specific layered structure. The examiner notes that at least some of the media described in the reference have excellent disc characteristics including C/N > 55 dB and eras ability < -35 dB. (page 9) The showing by the applicant is nowhere near the scope of coverage sought. The rejection stands.**

6. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Yamada et al. EP 0735158.

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Examples 3, 5-7 comparative example 2 and 3 in table 2 have the compositions shown in tables 2 as the recording layer in media comprising a polycarbonates substrate, a 200 nm ZnS-SiO₂ lower dielectric layer, a 25 nm recording layer, a 30 nm ZnS-SiO₂ upper dielectric layer, a 100 nm Al alloy containing 1 % Si as the reflective layer and a 10 micron UV cured resin as the protective layer. The sum of the Te and Sb are 85.5, 92,9291 and 94.5 % respectively. Example 10 in table 2 on page13 also includes nitrogen. The addition of various elements to the recording layer is disclosed. (7/48-52). The use of various alloys of Al, Au, Ag and Cu are disclosed. (9/26-27)

In addition to the arguments above, the examiner notes that example 10 undergoes 15,000 overwrites before experiencing a sudden increase in jitter (13/47), similarly examples 3 and 5-7 are useful with 7,000, 10,000, 8,000 and 10,000 overwrites before the jitter increases. The rejections stand.

7. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Iwasaki et al. JP 03-240590.

See examples E and F in table 1 (page 5), which do not seem to have an increase in C/N or jitter after 10,000 overwrites.

See the response above as no further arguments have been directed at this rejection.

8. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Iwasaki et al. JP 04-078031.

See examples E and F in table I-1 (page 7), which do not seem to have an increase in C/N or jitter after 10,000 overwrites.

See the response above as no further arguments have been directed at this rejection.

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9. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Yuzurihara et al. JP 11-070737.

Examples 21,24 and 26-29 in tables 2 and 3 have the compositions shown in these tables as the recording layer in media comprising a polycarbonates substrate, a 170 nm ZnS-SiO₂ lower dielectric layer, a 18 nm recording layer, a 20 nm ZnS-SiO₂ upper dielectric layer, a 120 nm Al alloy containing Ti as the reflective layer and a UV cured resin as the protective layer. The sum of the Te and Sb are 90.4 for example 21 and 89.2 % for the others. Note that addition of nitrogen to the recording layers in examples 27-29.

Note in examples example 21 is able to be used for 21,000 overwrites and example 18 is useful for 35,000 overwrites before jitter increases.

See the response above as no further arguments have been directed at this rejection.

10. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(a) as being fully anticipated by Miura et al. JP 2002-002116.

See examples 8 and 22 in table 1 on page 7.

See the response above as no further arguments have been directed at this rejection.

11. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Miura et al. '121.

See examples 8 and 22 in table 1 on page 7.

See the response above as no further arguments have been directed at this rejection.

12. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Ohno et al. EP 0847049.

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Example 5 is an AgGeSbTe optical recording medium which uses a 250 mW beam at a linear velocity of 2.5 m/s based upon the data in the applicant's table 4, this would have an irradiation of less than 1000 J/m^2 . Example 6 uses the same 250 mW beam at a linear velocity of 4.5 m/s. Example 7 uses a 400 mW beam with a rotation of 2,700 RPM.

The applicant's arguments are that over initialization is a problem, which results in jitter. In the cited reference, the media are described as initialized by low laser powers. The applicant's table shows that for velocities of 3 m/s, the use of 330 mW yields 1100 J/m^2 . Using the velocities and power of the beam in the reference yield 960 J/m^2 . The applicant bears the responsibility of showing the criticality of the power for all the media bounded by the scope of coverage sought.

13. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Ohno et al. 310.

Example 5 is an AgGeSbTe optical recording medium which uses a 250 mW beam at a linear velocity of 4.5 m/s based upon the data in the applicant's table 4, this would have an irradiation of less than 1000 J/m^2 . Example 8 uses a 300 mW beam at a linear velocity of 4.5 m/s. Example 10 uses a 400 mW beam with a rotation of 2,700 RPM.

The applicant's arguments are that over initialization is a problem, which results in jitter. In the cited reference, the media are described as initialized by low laser powers. The applicant's table shows that for velocities of 3 m/s, the use of 330 mW yields 1100 J/m^2 . Using the velocities and power of the beam in the reference yields 534 J/m^2 . The applicant bears the responsibility of showing the criticality of the power for all the media bounded by the scope of coverage sought.

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14. Claims 21,24,27,30,33,36,39 and 42 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Tominaga et al. '157.

Example 1B is an AgGeSbTe optical recording medium which uses a 8 mW beam at a linear velocity of 3 m/s based upon the data in the applicant's table 4, this would have an irradiation of less than 1000 J/m².

The applicant bears the responsibility of showing the criticality of the power for all the media bounded by the scope of coverage sought.

15. Claims 21,24,27,30,33,36,39,42 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over **either one of** Yamada et al. EP 0717404, Yamada et al. EP 0735158, Iwasaki et al. JP 03-240590 **or** Yuzurihara et al. JP 11-070737, **in view of** Ando et al. '175 and either of Suzuki et al. EP 1111598 **or** Suzuki et al. '780.

Ando et al. '175 describes the embossing of data relating to disk size, read out rate, recording density, serial numbers, linear velocity conditions, read power, peak power, base power and manufacture information (15/55-16/9)

Suzuki et al. EP 1111598 teach the determination of the performance characteristics of an optical recording medium including the optimum recording power [0021] and the sensitivity of the medium (gamma) [0016]. The use of both of these allows a range of useful laser powers and prevents selection of an improper laser power. [0021].

Suzuki et al. '780 teach the determination of the performance characteristics of an optical recording medium including the optimum recording power (abstract and 4/53+) and the sensitivity of the medium (gamma) (3/3-35 and 4/12-5/59). The use of both of these allows a

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range (margin) of useful laser powers and prevents selection of an improper laser power. (4/12-5/59.

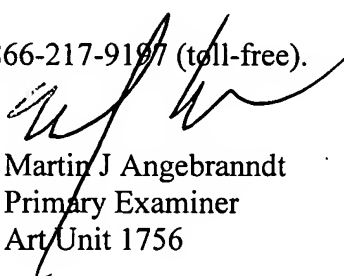
To support the assertion that embossing information relative to the performance characteristics of the optical recording media would have been obvious, the examiner cites Ando et al. '175 which teaches the provision of control data and specification data for the optical recording medium in a non-write-able portion of the medium and Suzuki et al. EP 1111598 or Suzuki et al. '780 which describe specific methods of characterizing the performance and holds that it would have been obvious to one skilled in the art to modify the media of **either one of** Yamada et al. EP 0717404, Yamada et al. EP 0735158, Iwasaki et al. JP 03-240590 **or** Yuzurihara et al. JP 11-070737 by adding performance data such as that described by either of Suzuki et al. EP 1111598 or Suzuki et al. '780 to prevent improper choice of laser powers and to provide this as embossed information as described by Ando et al. '175 to allow the user for forgo the optimization process.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebrannndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J Angebranndt
Primary Examiner
Art Unit 1756

12/30/2004